

spinelike setae ventrally, but none dorsally; tibia II has one short strong seta ventrally, the others being normal; genu II has two short strong spinelike setae ventrally, the others being normal; femur II has one strong short spinelike seta ventrally and three long whiplike setae dorsally, much as on femur I. Legs III and IV possess a combination of long whiplike setae and spinelike setae of medium length as figured. Length of female 1730  $\mu$ ; width 1090  $\mu$ .

The only specimen, a female, holotype U. S. National Museum No. 2547, was collected by Arturo Medina in Portuguese Angola, Africa, at Inga-Zanga, with aphids (no other data available).

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NEW SYNONYMY IN THE DERMANYSSINAE KOLENATI, 1859, WITH  
A DESCRIPTION OF A NEW SPECIES OF DERMANYSSUS

(ACARINA, DERMANYSSIDAE)

G. W. KRANTZ, *Oregon State College, Corvallis*

In his review of North American dermanyssid mites, Ewing (1922) erected the genus *Allodermanyssus*, designating *Dermanyssus sanguineus* Hirst as the type species. *Allodermanyssus* was characterized as having, in the female, a divided dorsal shield and the anus situated centrally in the anal plate. In all other respects, the genus was considered to be similar to *Dermanyssus*.

In 1956, Keegan placed *Dermanyssus acgyptius* Hirst, 1913, in the genus *Allodermanyssus* when the presence of a minute posterior dorsal shield on the female type material was confirmed. To date, therefore, there are two described species of *Allodermanyssus*.

Whether the presence or absence of a divided dorsal plate is sufficiently strong to merit generic differentiation in this group is open to debate. Examination of nymphs in both *Dermanyssus* and *Allodermanyssus* reveals that the dorsal sclerotization is usually fragmented. For example, the protonymph of *D. muris* Hirst (1914) possesses a posterior dorsal plate similar to that of *A. sanguineus*, as well as four pairs of mediolateral platelets. The two above-mentioned protonymphs show a striking similarity in overall dorsal sclerotization (figs. 6, 7). The protonymph of *D. gallinae* (Degeer) has a posteriorly fragmented dorsal plate consisting of three pairs of posteromedian and a pair of posterior platelets (fig. 5). Coalescence of platelets occurs at the deutonymphal molt in both these genera, with the consolidation resulting in sclerotization resembling that of the subsequently emerging adult. Platelet coalescence in males of *A. sanguineus* results in a single dorsal plate of a type similar to that of males of the genus *Dermanyssus*.

The variation in anal plate morphology of *Dermanyssus* and *Allodermanyssus* seems too minor to be considered a major generic character. Further, the position of the anal opening of *A. sanguineus* may

vary considerably from that of *A. aegyptius*, with that of the latter showing a definite posterior orientation on the anal plate (Hirst, 1914). Thus the only character separating these genera is based on the degree of plate and platelet coalescence occurring initially in the female deutonymph.

Recently, a series of specimens representing an undescribed species of the subfamily Dermanyssinae was received from Alaska, the females of which possess three primary dorsal plates. On the basis of the discussion above, and because of the apparent variations in platelet coalescence as illustrated in the accompanying description, the genus *Allodermanyssus* Ewing is herein placed in synonymy with *Dermanyssus*.

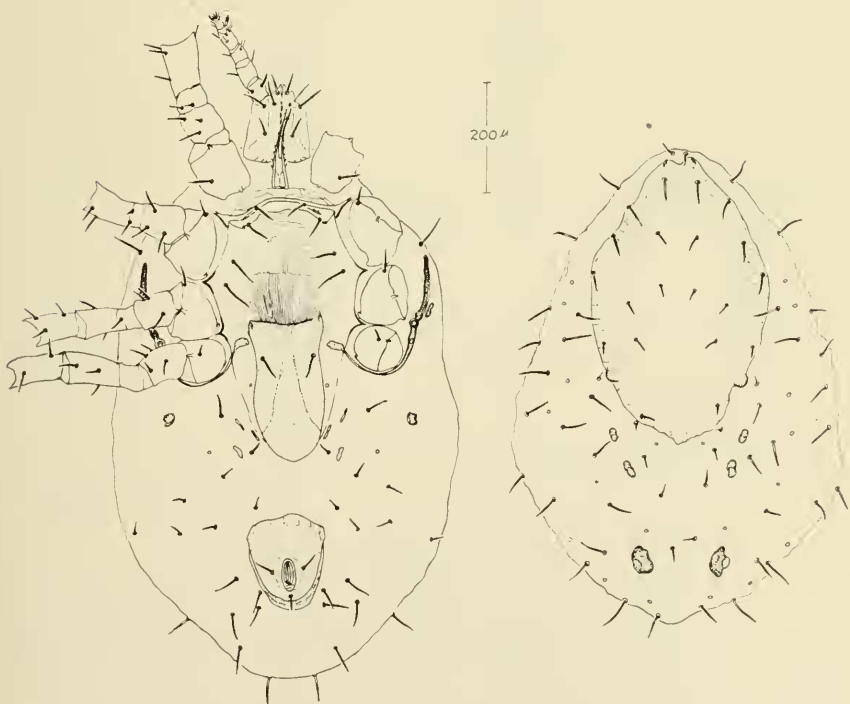
#### Genus *Dermanyssus* Dugés

*Dermanyssus* Dugés, 1934, Ann. Sci. Nat. Zool., I, 18.

*Allodermanyssus* Ewing, 1922, Proc. U. S. Nat. Mus. 62(13): 2. *New synonymy*.

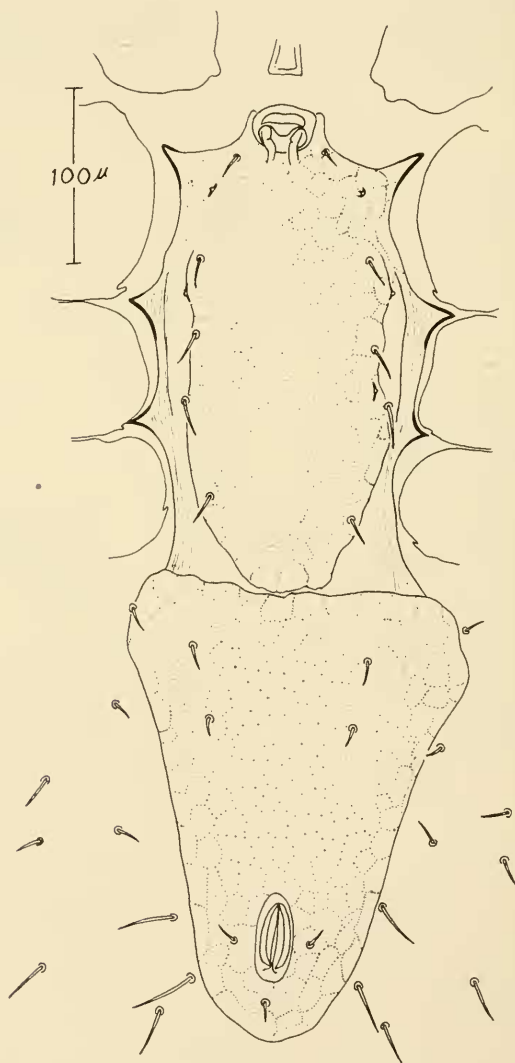
*Type*.—*Acarus gallinae* Degeer, 1778.

*Generic description*.—Chelicerae of female long and needle-like; chelae minute. Dorsal plate undivided, or divided posteriorly into one or more small primary



*Dermanyssus triscentatus*, female. Fig. 1, dorsal aspect; fig. 2, ventral aspect.

platelets. Genitoventral plate of female pointed or rounded posteriorly and bearing one pair of setae. Peritreme joined posteriorly with fovea of coxa IV. Coxae without spurs. Ventral plate of male undivided or provided with a suture at the level of coxae IV. Anal plate rounded or peltate, with the anus situated centrally or posteriorly in the plate. Parasites of birds and small mammals.



*Dermanyssus triscutatus*, male. Fig. 3, ventral aspect.

***Dermanyssus triscuatus*, n. sp.**

*Female* (Figs. 1 & 2).—Average length of idiosoma (60 engorged specimens)—914 $\mu$ , with a range of 840-1022 $\mu$ ; average width at insertions of coxae IV—536 $\mu$ , with a range of 490-602 $\mu$ . Ventrally, similar to *D. gallinae*, except for the following: Peritreme extending anteriorly to a point just behind the midline of coxae II. Sternal plate abbreviated and forked anterolaterally to form a spine-like protuberance on either side. Dorsally, with a short weakly reticulated anterior plate extending little more than half the length of the idiosoma and pointed posteriorly; with ten pairs of simple setae, the more anterior pairs far exceeding the others in length; usually with a pair of small rounded lateral protuberances at a point posterior to the insertion of coxae IV. Vertical setae short, inserted in the integument just above the anterior plate. With a pair of small primary platelets situated near the posterior end of the dorsum, and two pairs of smaller platelets flanking the posterior edge of the anterior plate. Platelets without setae.

*Male* (Fig. 3).—Length of idiosoma—660 $\mu$ . Width at insertions of coxae IV—422 $\mu$ . Ventrally, similar to male of *D. gallinae*, except for the following: Genito-sternal plate with five pairs of simple setae. Peritreme of variable length, but never extending forward to the anterior edge of the insertion of coxae II. Dorsally, with an undivided, weakly reticulated dorsal plate which extends anteriorly and anterolaterally to the margins of the idiosoma, tapering posteriorly from the level of coxae II and extending nearly to the posterior margin of the body. With approximately 16 pairs of setae inserted on the dorsal plate, the more anterior pairs exceeding the others in length. Unfortunately, the dorsum of the one male specimen available to the writer was somewhat obscure.

*Immature stages*.—Similar to *D. gallinae*, except that the vertical setae often are inserted anterior to, rather than on, the anterodorsal plate (Fig. 4).

*Type specimens*.—Holotype female and allotype male on slides No. 58-16631H and 58-16631A respectively, deposited in the collection of the U. S. National Museum, Washington, D. C. Collecting data are as follows: Holikachuk, Alaska; August, 1958; Coll. John Pettit; collected on and in school buildings.

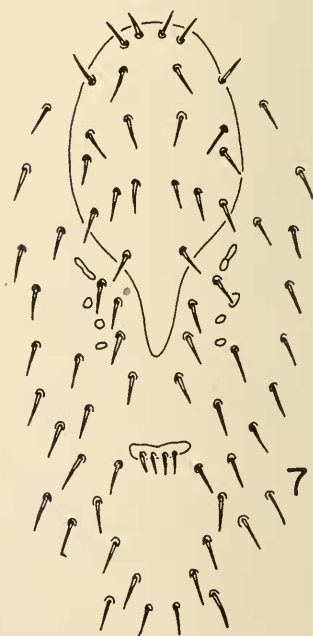
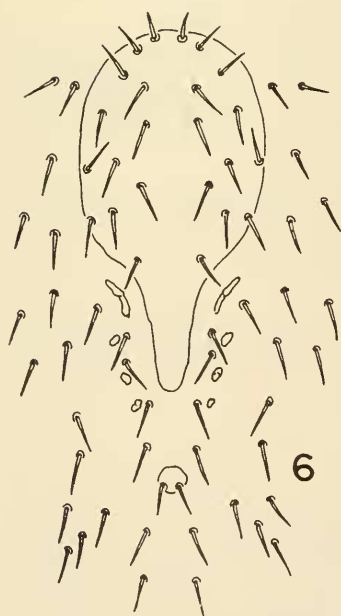
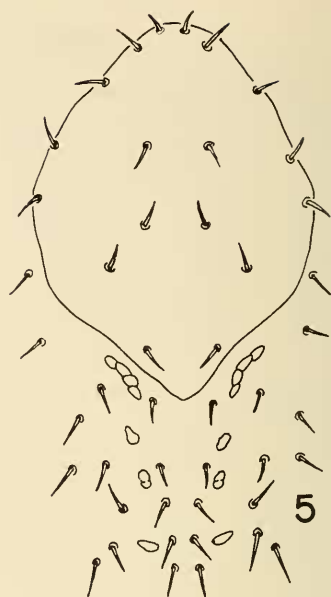
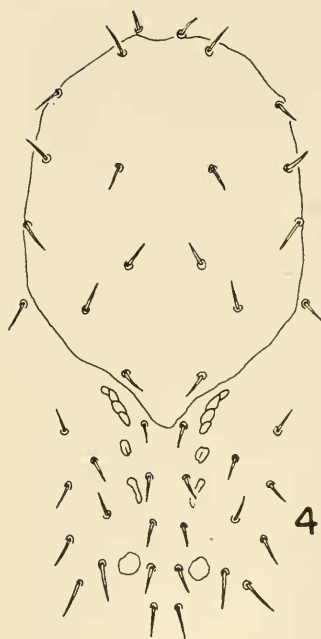
*Type host*.—Unknown. Several northern cliff swallows were found to be nesting in the infested buildings and may have acted as the natural host for *D. triscuatus*. It was reported that the mites were biting school children and causing dermal irritation.

*Type locality*.—Holikachuk, Alaska.

*Optical equipment*.—Drawings were made and morphological data were collected with the aid of a Spencer phase contrast microscope equipped with dark medium contrast objectives and illuminated by a Spencer Ortho-illuminator.

## REFERENCES

- Ewing, H. E., 1922. The dermanyssid mites of North America. Proc. U.S.N.M. 62 (2459), Art. 13:1-26.  
Hirst, S., 1914. On the parasitic acari found on the species of rodents frequenting human habitations in Egypt. Bul. Ent. Res. 5(3):215-229.  
Keegan, H. L., 1956. Ectoparasitic laelaptid and dermanyssid mites of Egypt, Kenya and the Sudan, primarily based on NAMRU 3 collections, 1948-1953. Jour. Egyptian Public Health Assoc. 31(6):199-272.



Dorsal aspects of dermanyssine protonymphs. Fig. 4, *D. triscutatus*; fig. 5, *D. gallinae*; fig. 6, *D. sanguineus*; fig. 7, *D. muris*.